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CLAIMS

Revised

Claim 1 (Once Amended)

A1 A shaft sealing assembly with a pumping device for sealing a fluid at a space between a housing and a rotatable shaft, the shaft sealing assembly comprising:

a seal ring unit, coaxially surrounding said shaft within said housing and arranged for movement axially relative to said shaft under a resilient pressure;

a counter ring unit, coaxially surrounding said shaft within said housing and prevented from axial movement relative to said shaft when in operating position;

each of said ring units having an end face for mutual engagement under said resilient pressure to form a seal, one of said ring units being mounted for rotation with said shaft at least one of said end faces having a surface profile to act on a sealed fluid between said end faces; and

a pumping means, positioned concentrically with said shaft and concentrically within said housing and positioned between said space and said sealing means for vaporizing a liquid portion of said fluid, said pumping means comprising a threaded internal or external cylindrical surface of a member.

Claim 2

Cancel

A2 Claim 3

A sealing assembly according to Claim 1 where said pumping means comprises a threaded external cylindrical surface of a member mounted for rotation with said shaft.

Claim ~~3~~ ³

A3
A sealing assembly according to Claim 1 where said pumping means comprises a threaded internal cylindrical surface of a member mounted for rotation with said shaft.

Claim ~~5~~ ⁴

A sealing assembly according to Claim 1 where said surface profile on one of said end faces is a plurality of helical grooves.

Claim ~~6~~ ⁵

A sealing assembly according to Claim 1 where said housing comprises a port near said sealing means, said port connected to communicate with an external gas source by means of a one-way valve, said valve preventing outflow of said sealed fluid.

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CLAIMS

Version showing corrections made

Claim 1 (Once Amended)

A shaft sealing assembly with a pumping device for sealing a fluid at a space between a housing and a rotatable shaft, the shaft sealing assembly comprising:

[a sealing means comprising;]

a seal ring unit, coaxially surrounding said shaft within said housing and arranged for movement axially relative to said shaft under a resilient pressure;

a counter ring unit, coaxially surrounding said shaft within said housing and prevented from axial movement relative to said shaft when in operating position;

each of said ring units having an end face for mutual engagement under said resilient pressure to form a seal, one of said ring units being mounted for rotation with said shaft at least one of said end faces having a surface profile to act on a sealed fluid between said end faces; and

a pumping means, positioned concentrically with said shaft and concentrically within said housing and positioned between said space and said sealing means for vaporizing [of] a liquid portion of said fluid, said pumping means comprising a threaded internal or external cylindrical surface of a member.

Claim 2

Cancel

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Claim 3

A sealing assembly according to Claim 1 where said pumping means comprises a threaded external cylindrical surface of a member mounted for rotation with said shaft.

Claim 4

A sealing assembly according to Claim [2] 1 where said pumping means comprises a threaded [external] internal cylindrical surface of a member mounted for rotation with said shaft.

Claim 5

A sealing assembly according to Claim 1 where said surface profile on one of said end faces is a plurality of helical grooves.

Claim 6

A sealing assembly according to Claim 1 where said housing comprises a port near said sealing means, said port connected to communicate with an external gas source by means of a one-way valve, said valve preventing outflow of said sealed fluid.

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